THE SOCIAL AND ACADEMIC SUCCESS OF YOUNGER-THAN-AVERAGE AGED STUDENTS AT McGILL UNIVERSITY

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A report of the McGill Giftedness Project and the Centre for Teaching and Learning Services

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Background and Description of the Sample

Several projects in the United States in the past decade have created opportunities for exceptionally able adolescents to enter university in their early teens. Though these programs take advantage of generally greater flexibility in matriculation requirements than exist in Quebec and Canada, we remained curious about the existence of young matriculants at McGill and their performance, both social and academic.

Computerized registration records from 1971 to 1977 were scanned. It was discovered that about 500 of McGill's 4000 annual admittees are one year or more younger than the usual age of entry, and about 100 are at least two years younger. McGill's young matriculants have all completed an appropriate entry qualification (e.g., high school graduation outside Quebec, or a certificate of completion of two years of CEGEP--Quebec community college, following the last year of high school--in a suitable program), which means they were accelerated before the end of high school.

To provide a manageable sample of students whose university results could be assessed yet were capable of being contacted, the study was restricted to students admitted in the autumn of 1977. Being 2 years younger than the modal age of entry was determined by selecting students who had not reached their 17th birthday by September 30th, 1977 (the modal age of entry is 19). A computer search was conducted for 1977 matriculants born from January to September 1960 (students born from October to December, 1959 would also have been eligible to participate in this study but were not requested because school systems vary within this range of months regarding first grade admission policies.)

The computer search generated 53 students' names, 22 of whom could not be reached, refused to reply, or sent no reply. Full responses were received from 31 students (a 58% response rate), a further 4 of whom had to be dropped because

they were not university matriculants but in a CEGEP-equivalent diploma program in agriculture (3) or music (1). The final sample consisted of 27 early matriculants.

Data were collected on the following variables related to their presence at the university:

- gender,
- university program,
- grade-point average (students gave us written permission to obtain their full transcripts from the Registrar),
- age of entrance to university,
- where they got their secondary education,
- reason for early entry to university (rapid advancement, grade skipping, early school entrance, etc.), and
- involvement in extra curricular activities (sports, clubs, elected offices and honors, activities outside the university).

The sample included 11 males and 16 females; 22 were not yet 17 years old on entry and 5 were under 16. The preuniversity academic credentials included 12 who had completed 11 years of schooling, 10 with 12, 3 with 13, and only 2 with CEGEP diplomas. Before any formal analysis was undertaken it was clear that CEGEP was not the common path to McGill for these students as it is for the vast majority of others.

Of the 27, 9 were from the U.S.A. (33%, nearly 5 times the overall proportion of Americans at McGill), 7 had attended private Quebec schools which followed the 12-year French "Lycée" system, 5 came from other provinces having completed grades 12 or 13, and only 6 came from Quebec public schools. Their origins were, overall, atypical, and changing school systems clearly accounted for some of their acceleration; more is said about this below.

The students came to be accelerated in several ways: 15 skipped one or more elementary or high school grades, including 12 at the secondary level, 7 changed school systems and benefited from high regard for that system from which they came, and 4 participated specifically in rapid advancement programs.

Academic Performance

The students were enrolled at McGill in the following programs. The following mean CGPAs are for the 21 students who completed their programs plus one who went on to medical training at the time these data were collected.

Degree	n	CGPA
BSc	6	3.32
BEng	4	2.82
BA	5	2.84
BEd	1	3.42
BCom	1	2.65
BArch	1	3.49
Transferred from BEng to BSc	1	3.33
Transferred from BEd to BA	1	2.80
Transferred from BEng to BA	1	2.47
Transferred from BSc to BA	1	2.95

Comparison of Early Matriculants' Performance with that of Other McGill Students (Percentages)

CGPA	Accelerants*	BA1	BA2	BA3	BSc1	BSc2	BSc3	BEng1	BEng2	BEng3
3.40+	25.9	13.3	15.7	20.6	32.9	27.0	27.6	18.9	14.7	22.7
3.00-3.39	14.8	20.5	24.0	28.6	19.8	20.9	27.0	21.7	20.1	24.6
2.80-2.99	18.5	12.1	12.9	9.7	9.8	11.0	11.8	15.5	12.9	14.7
2.00-2.79	29.6	33.0	35.2	34.6	24.1	29.6	29.6	35.3	46.9	35.7
LT 2.00	3.7	20.2	10.9	6.4	13.3	11.3	4.0	14.9	5.3	2.2
Withdrew	7.4%**	over 3 years: 32%			over 3 years: 20%			over 3 years: 12%		
GPA	2.95	2.78	3.00	3.13	2.78	3.10	3.64	3.00	2.79	3.25

Note: 3.00 is a "First Class" grade

2.80 is the minimum in many programs for admission to graduate studies

2.00 is the minimum grade for students not considered to be encountering academic difficulty

* For the accelerated sample, CGPA's cover all the years of students' programs.

** No CGPA was available on record for these 2 students from the present sample; for all other columns along this line of the table, the precentage given is from among those represented above. Differences from 100% in the addition of the columns arise from the rounding of decimal fractions.

Overall, the accelerated university entrants perform academically as well as other students in the same university programs, less than the usual amount of academic difficulty was encountered, and fewer than average withdrew. The students were also frequently (51%) enrolled in programs usually regarded as particularly challenging, namely science and engineering. Those in science were enroled in major programs in biochemistry (2), chemistry (2), jointly in physiology and physics, and honors programs in mathematics, mathematics with a joint major in computer science, and physiology. The one general BSc student entered medicine before completing the degree. Finally, five of the 27 (19%) earned major university scholarships versus the university rate of about 7%.

Of the 27, 6 (22%) were still 2 years accelerated on graduation (mean CGPA=3.65), one (4%) entered medicine after 1 year as an undergraduate, graduation, 9 (33%) took one extra year and graduated one year younger than average (mean CGPA=2.95), 5 were "on time" for their age (mean CGPA=3.07) (i.e., they took 5 years to complete the 3 year program or 6 years for a 4 year program). One student (who was blind) transferred to another institution, 1 withdrew, and 4 were incomplete at the time data were collected (3 of whom are known since to have withdrawn) (mean CGPA of the withdrawals and incompletes being 2.30). The withdrawal rate (5 of 27 or 18.5%) is about the same as the university average of 21% for undergraduates.

Throughout the university, 35% of undergraduate students completed their 3-year programs within the normally prescribed time, and 50% the 4-year program (4-year programs are for students from outside Quebec with 12 recognized years of schooling prior to entry). These figures do not appear to be atypical, for example, City University of New York reported 48.5% of students finishing 4-year programs on time and 25.7% in 2-year programs (Maeroff, 1983). In comparison, therefore, those of our sample took a little extra time at university, and this is

partly accounted for by their changing programs. While it might be pointed out that in many cases they may have improved their performance by taking lighter loads, such appears to be a mature and suitable strategy for younger students, and it may have been to their advantage to have spent these years in university rather than high school (recall that only 2 of our 27 entered from CEGEPs, so that seems not to have been an alternative).

The general level of academic performance of these early matriculants is very good, and considering that several of them were accelerated by the good fortune of the reputations of the schools or systems from which they transfered during earlier parts of their academic careers, and not necessarily exclusively in every case by recent outstanding performance, their success is all the more remarkable. For members of the university who recall the pre-CEGEP days when these 27 students would have been exactly at the modal age of entry, this may not be surprising. The conclusion that must be drawn is that the university need not fear for the academic success of younger-than-average students whom it might admit, at least those who present a suitable matriculation credential. Evidence elsewhere (cf. Shanky, 1974, 1979) speaks equally for the potential success of young students of high ability who skip 3 or 4 years of high school and do not hold a high school leaving diploma. Much earlier, Keyes (1938) suggested that 2 years was a maximum safe limit for acceleration; the present unselected sample is largely within this limit. By contrast, Stanley's subjects, and the thousands of pupils who now annually take advantage of the mathematics and other "Talent Searches" which have ensued, are exposed to several levels of self-selection, testing and training. Such selectivity might increase Keyes's limit for suitably identified adolescents.

Social Performance

Satisfaction with school. Students were asked if they found school to be more stimulating and satisfying before or after their having been accelerated: detailed statistical analyses are not reported in this report, but significant results (at the .05 level) on such statistics as chi-square form the basis for conclusions such as follow. The analyses are available on request for examination.

stimulating	before	. . . after
yes	14	19
same	2	1
no	8	1
no reply	3	4

Acceleration appears, at least retrospectively, to have resulted in a more positive opinion of the school experience of these students.

Participation in extracurricular activities. This group of students was relatively uninvolved in such activities. Various McGill officials mention an 80% campus participation rate in athletics alone. Our sample replied as follows with regard to athletics:

5 or more activities	2	(7%)
2 to 4 activities	4	(15%)
1 activity	7	(26%)
no athletic participation	14	(52%)

Other university activities fared no better:

music and drama	1
nonathletic clubs	6
student administrative offices	4
other (blood drive, etc.)	8
none	8

Off-campus activities were equally treated:

sports	7
assorted others	8
none	10

These students were goal-oriented and academically but not heavily socially involved in campus life.

Friendships. The vast majority (24 or 89%) sought friends at their "grade" rather than age (1 or 5%) level. One sought younger friends. In other words, their acceleration did not force them to seek friends elsewhere. Their ease of forming same-sex relationships was rated as:

very easy by	9 students	70%
reasonably easy	10	
difficult	6	30%
very difficult	2	

Forming opposite-sex friendships was similarly not a dominating problem:

very easy	11	66%
reasonably easy	7	
difficult	8	34%
very difficult	1	

There were very few comments by the respondents to any of the questions, but a few remarks pointed out that some of the socialization problems resulted from language and cultural differences independent of academic acceleration.

Consistent with the published literature on bright students, these students preferred a small number of close friends (19 or 70%) over large groups (4 or 15%) or both (also 4). This is borne out in a further question about having formed friendships of lasting value:

many	4	(15%)
a couple, some	17	(63%)
one	2	(7%)
none	4	(15%)

These accelerated students are not social isolates, and at the university level the age gap does not seem to hinder the formation of friendships. Keys (1938) also noted that such students typically do better in university; their problems were at the high school level.

Perception of early matriculation. The students were asked if they would approve of a younger sibling entering university at age 16 or younger. They replied as follows:

approve	6	(22%)
do not approve	8	(30%)
"it depends"	13	(48%)

While 10 offered no further comments, 13 concurred with one respondent that "it depends on maturity, emotional level and experience because it's tough academically and socially." On the other hand, they replied largely without personal regret when asked about their own age of entry to university:

too young	8	(30%)
about the right age	18	(67%)
later than wished	1	(3%)

Meeting needs. The students were asked if they felt they had any special needs at the university. They replied as follows:

no reply or none	14	(52%)
vocational advice	3	(11%)
academic advice	3	(11%)
social & personal counselling	6	(22%)
blindness	1	(3%)

This did not appear to be remarkable. The university Counselling Service reports that it serves some 6% of the full-time student body in a given year. Since other agencies (e.g., chaplaincy, Education Counselling Centre) also provide such help, the 22% need for social and personal counseling is not out of line. Studies elsewhere of even more radically accelerated students found a similar lack of problems (Stanley, 1974, 1979).

The students were asked if whatever needs they had were a result of acceleration. Only 8 (30%) replied yes and that they were too young to advise themselves. This seems to be a mature recognition of limitations rather than a problem to worry about. A further question asked if the needs were met, to which 20 (44%) gave no answer, 2 (7%) said yes, 3 (11%) said no and 2 (7%) said partially. A recent report on student services at McGill (Logsdon & Shore, 1982) found that students were widely aware of available services. General major concerns among students for help in career planning, study and examination-taking skills seem equally applicable to early matriculants. When asked by whom any needs were indeed met, 17 (63%) gave no reply, followed by:

counselling services	5	(18%)
friends	3	(11%)
family	2	(7%)

The students were also asked to reply to an open-ended question on where they

would like unmet needs to be taken care of. Four (15%) used the opportunity to criticize poor, impatient advising and claimed to use trial and error, 3 (11%) thought they would benefit from smaller classes and a program to facilitate social orientation (perhaps such as serves Mature Students), 2 (7%) noted that counselors were unaware of their being younger and advised a lighter workload (which most of them undertook, as revealed earlier), and 1 (4%) took the opportunity to praise the Dean of Students.

Finally, in this regard, the students were asked if they had any general comments on their education or on having been accelerated. The 25 replies can be tabled as follows:

1. 6: no reply,
2. 5: it was a positive experience, flexible and it reduced the waste of time,
3. 4: acceleration is socially difficult, notably in making friends,
4. 2: age is not the issue, just hard work,
5. 2: social and academic acceleration problems are encountered prior to university entry, school teachers are not flexible (supported by Keys, 1937 and Glazer, 1982),
6. 2: acceleration is difficult vocationally, making it hard to consider careers,
7. 1: not prepared socially or vocationally, easy to become depressed,
8. 1: there were not enough electives to get a proper general education (perhaps reflecting having missed the CEGEP experience),
9. 1: (from a transferred student . . .) enjoyed the new program but jealous of those in previous program where own failure was experienced, and
10. 1: "no."

These comments are somewhat more negative than reported elsewhere. It should be recalled however, that not all these students had been intentionally accelerated because of their superior performance. Students accelerated explicitly because of

their high ability expressed much more positive sentiment. On the other hand, the lack of serious problems for most of the sample and the very good academic performance of the group is all the more noteworthy in these circumstances.

Reasons for attending university. In rank order, the priorities expressed were:

getting a better job	19
prestige	11
social advancement	11
general education	10
professional training	8
higher income	4
personal enhancement	3
social security	3
independence	2
pursuing interests	1

The goal orientation of this group is clearly reflected once more. Despite the tough economic times, perhaps it is to the university's credit that it is seen by such a group as leading to better employment. Regretably we did not probe the meaning of "better." There is no reason to rule out personal satisfaction as one possibility. In any case, the reasons are appropriate, correspond well to the distribution of programs selected, and are probably not widely off the norm in an institution as heavily populated in the professions and science as McGill.

Overall assessment of social performance. Using a procedure developed in a parallel study of accelerated high school leavers generally not yet at university (Glazer, 1982), a subjective evaluation was made of each respondent and the results of the two samples were compared.

	at university (n=27)	high school (n=24)
did very well	7	0
did well	8	5
had some trouble	7	6
did not do well	5	6

For simplicity, the table was collapsed:

	at university	high school
did well	15	5
some problems	12	19

More students from similar accelerated populations evidently do well at the university level; in time they appear to outgrow or escape many problems, as suggested by Keys nearly half a century ago (1937).

Through the provision of a large number of support services, universities recognize that many students will normally have some personal or social difficulties requiring assistance. There is none that seems to be a particular outcome of having entered at least two years much younger than the modal age of one's matriculating class.

Other McGill Experience

Two of McGill's professional faculties, Law and Medicine, have had recent experience with the admission of younger students. Approximately one-sixth of Law's 150 annual admissions are directly from CEGEP (2 years younger than bachelor's graduates admitted before the 2-year preuniversity CEGEP program was added to grade 11 and undergraduate degrees reduced from 4 years to 3, and 3 years younger than current bachelor's graduates). The faculty reports that the main problem is knowledge of English by French-speaking applicants. Otherwise the students do well.

In Medicine, about 35 of 160 annual places (22%) are filled by students with

one year of their BSc completed (down from 60 of 160 a few years ago). The faculty also reports excellent progress by these students.

Both these situations echo the results expressed above: a judiciously applied early entry opportunity can be a positive experience for both the institution and the students, not to omit society at large which pays a substantial price for every year of schooling and year lost of productive contribution afterward.

Conclusions

Despite the absence of any encouragement for early entry and the existence of regulations acting, indeed, to discourage it, a substantial number of students enter McGill University much younger than average. Many of them have accelerated due to transfers across school systems, and almost none have entered through the CEGEP system. This group represents a highly able population of students whom the university might wish to attract. This is not to be easily achieved by the normal recruitment process of the majority of McGill's students, that is, from among CEGEP graduates.

These students have elected challenging programs, performed very well academically and suffered no evident social disability resulting from their acceleration. Some 200 studies of educational acceleration at all levels have come to similar conclusions, when the acceleration is appropriate and supported by all involved.

It would appear reasonable for the university to be open to proposals which might attract academically qualified but younger applicants. Even with the numbers presently enrolled (about 500 a year accelerated one year, 100 a year 2 or more), it might be useful to invite such new students to a special orientation meeting, if only to inform them of the university's awareness of their existence and of services available. Even a letter to that effect might be a good beginning.

Postscript

The McGill Giftedness Project (Faculty of Education) and the Centre for Teaching and Learning Services have initiated interest in young students at the university, under the coordination of Professor Shore. Preliminary enquiries have begun into the feasibility of offering interest courses for gifted youngsters that could be optionally completed by taking College Board Advance Placement tests during high school and CEGEP years, thereby shortening the time spent perhaps at both CEGEP and McGill, while not incurring financial penalty to public schools by "radical acceleration" or "skipping" as instituted a decade ago at The Johns Hopkins University and emulated at dozens of universities since then. The present report indicates that accelerated students may, in fact, be avoiding the CEGEP route to university. This may also imply avoiding Quebec universities in general. Other studies of career aspirations of able youth (e.g., Petersen, 1982) clearly reveal that their interests call for advanced professional and graduate training. A plan which could accelerate access to the specific, high-level goal-oriented interests of such accelerants could be very attractive to them.

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